



U.S. Department
of Transportation
**Federal Aviation
Administration**

SAFO

Safety Alert for Operators

SAFO 09012
DATE: 6/12/09

Flight Standards Service
Washington, DC

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

A SAFO contains important safety information and may include recommended action. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO.

Subject: Dangers of Improperly Inflated Tires

Purpose: This SAFO emphasizes the necessity for operators of all aircraft and especially the Learjet Model 60, to maintain the correct tire pressure. This is done by measuring cold tire pressure at the intervals recommended by the manufacturer.

Background: On September 19, 2008, a Learjet Model 60 departing the Columbia South Carolina Airport overran the runway when the crew attempted to reject the takeoff. The two crewmembers and two of the four passengers were fatally injured, the other two passengers suffered serious injuries. The aircraft was destroyed by extensive post-crash fire.

The initial investigation revealed tire debris and portions of the airplane's components on the runway. It is possible that low tire pressure could have led to a tire failure.

Discussion: The average aircraft tire is composed of 50% rubber, 45% fabric and 5% steel. These tires are designed to carry heavy loads at high speeds. Problems caused by incorrect tire pressure can lead to catastrophic failure of the tire(s). Over inflation of a tire can cause uneven tread wear, reduced traction, make the tread more susceptible to cutting, and can increase the stress on aircraft wheels. Under inflation of a tire can cause uneven tire wear and greatly increases stress and flex heating in the tire, which shortens tire life and can lead to tire blowouts.

It is imperative pilots understand the dangers of improperly inflated tires. Pressure checks of tires are most meaningful at ambient temperature when tires have been at rest for at least two hours since their last use. When tire pressure is checked with a gauge, the gauge must be calibrated.

Recommended Action: The accident in South Carolina is one of many in which malfunctioning aircraft tires may have been a safety issue. All personnel should become familiar with the contents of this SAFO, and the appropriate personnel should check tire pressure using the manufacturer's recommended intervals and procedures.

Contact: For any questions pertaining to this SAFO, please contact the General Aviation and Commercial Division, AFS-800 at (202) 267-8212.